

SMART SOLUTIONS FROM **ENVIROSPEC.COM**

PowerWashPro

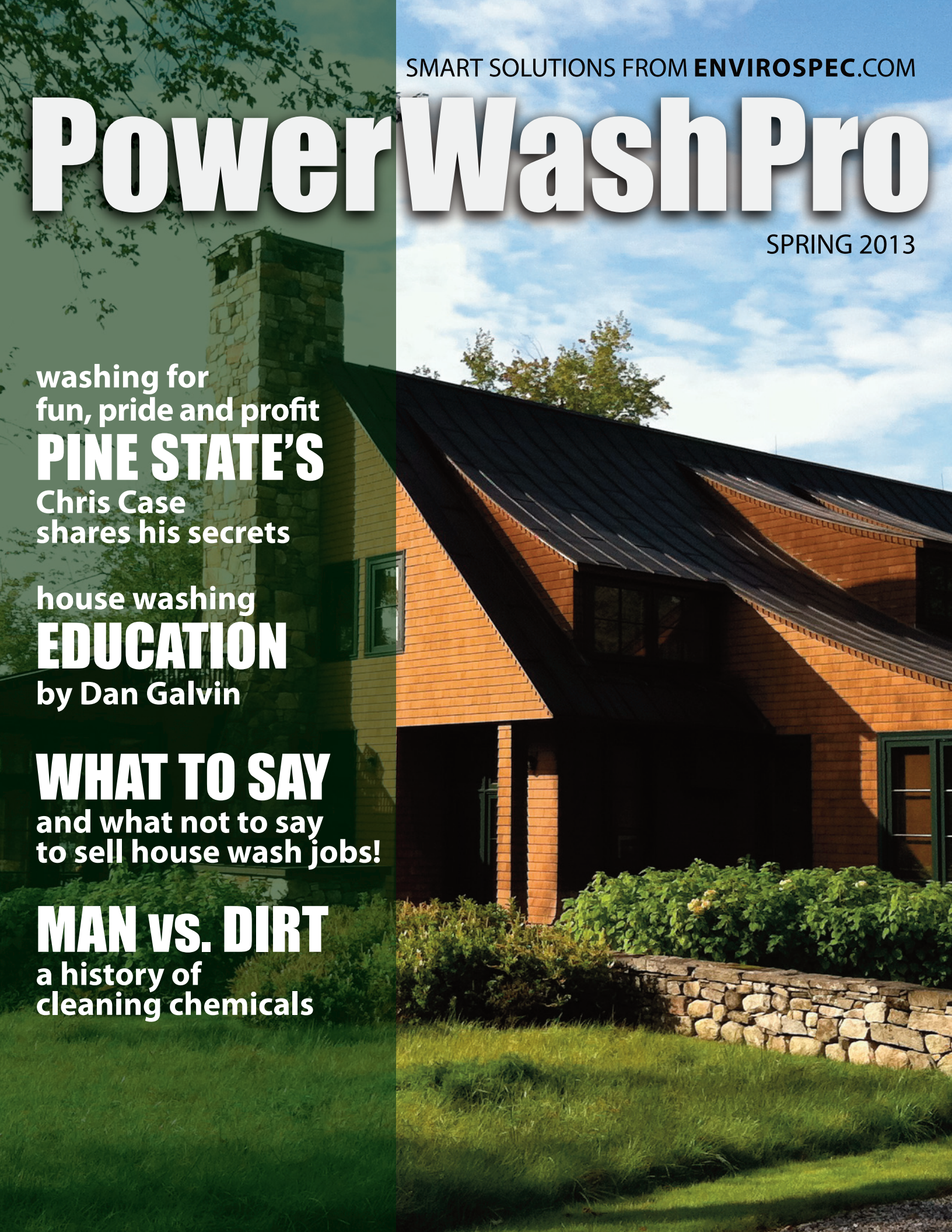
SPRING 2013

washing for
fun, pride and profit
PINE STATE'S
Chris Case
shares his secrets

house washing
EDUCATION
by Dan Galvin

WHAT TO SAY
and what not to say
to sell house wash jobs!

MAN VS. DIRT
a history of
cleaning chemicals



THIS MONTH:

SPRING 2013

Have I got a deal for you.

Everyone loves a bargain. And that's what you'll find when you go to **EnviroSpec.com** and click on **Sale Items**. Check out engines, pumps, sprayers and other equipment at up to half off. It's all perfectly new, top-grade stuff. And visit regularly, because you never know what you might find.



Clean the kitchen.

Cleaning baked-on cooking residue in commercial kitchens can be one of the nastiest jobs around. Not just because of the oily grime, but because of caustic cleaning chemicals that irritate your eyes, nose, lungs and skin. Fortunately, the foaming cleaner **Hood Pro** from EnviroSpec works a whole lot better, without you inhaling fumes that humans were never meant to breathe.

Be kind to animals.

One of the top charity causes here at EnviroSpec are abandoned, abused dogs and cats. Animal shelters around the country offer comfort and medical care for our furry friends; they also provide the spaying and neutering that reduces the population of strays. So help those who can't help themselves, by volunteering or donating—or both—at the pet shelter in your town.



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You never know what you might learn at EnviroSpec.com

We've gotten some great feedback from the first issue of PowerWashPro. Contractors apparently found out things about their own profession they didn't know. As you'll see, this new issue continues to offer smart tips and ideas for power wash professionals.

As it turns out, though, this is only the tip of the iceberg.

The real in-depth educational resources are waiting for you at our website, EnviroSpec.com.

How do you clean a gas station, a mobile home or a dairy farm? Those are just some of the many topics you'll come across on *How To Wash Stuff*, a popular and informative feature.

Here's another one: What would you use a Foam Cannon for? The answer to that question is found on yet another educational resource for mobile wash contractors, the *EnviroSpec Technical Library*. Sure, you know a lot. But come look around, and you'll be amazed at how much more you can add to your professional knowledge base.

One of the most important pieces of information in our business is the *Material Safety Data Sheet* for each chemical you use. Understanding health, environmental and disposal considerations is the mark of a true professional. Simply go to the Chemicals page of the EnviroSpec online catalog and click on *MSDS* for each detergent.

You can also click on *Product Info* for every item, and find out exactly how to use that chemical for the most effective and efficient results.

So enjoy PowerWashPro now, and we're looking forward to seeing you online later.



Man vs. dirt: A history of cleaning chemicals

By Tom Tortorici

Before there was much of anything to clean, there was water. As mankind's first cleaning chemical, it was a pretty effective one; you could easily wash the mud off your hands in a waterfall, puddle or ocean. Because of its molecular structure, many substances simply dissolved, and were rinsed away, in water, which is why it's considered the 'universal solvent.'

Around 2200 BC, the ancient Babylonians found a way to improve water's cleaning power, and like so many great discoveries, it was by accident. Water had been used to clean cooking utensils that were covered in animal fat and wood ash. By combining the three substances, they inadvertently created the world's first soap.

The Egyptians used vegetable oils and alkaline salts to make their soap, and were perhaps the first people to regularly bathe their bodies and launder their clothes. Did that bit of progress improve social interaction, and therefore help create true societies? History doesn't say.

The hearty people of the Greek empire managed to wash themselves without soap or water. They'd rub down their bodies with clay, sand, pumice or ashes. Then they'd cover themselves with oil, and finally scrape the oil off with metal blades.

The Romans rediscovered the benefits of soap and water, again by accident. Atop Mount Sapo, animal sacrifices were traditionally practiced. When it rained, animal fat and volcanic ash flowed down into the Tiber River. The mixture created a lye soap solution, making the river an ideal place to wash up. And 'Sapo' became the basis for our word 'soap.'

After the fall of the Roman Empire in the 5th century, the tradition of washing ourselves and our stuff went away,

ushering in 1000 years of uncleanness and bad hygiene, not to mention several deadly plagues.

A new awareness brings new products

Finally, in the late 1600s, cleanliness came back into fashion in Europe, as people made the connection between personal hygiene and defense against disease. Manufactured bars of soap became available, along with — of course — advertising campaigns to promote them.

In some countries, though, soap was taxed as a luxury item. Eventually that tax was removed, enabling even people of modest means to enjoy clean bodies and possessions.

In 1898, B.J. Johnson developed the first formula for liquid soap. Since it was made of palm and olive oils, he called it 'Palmolive.' It was an instant hit. The first liquid soap for household cleaning followed; it was made from pine oil, and was branded as 'Pine-Sol.'

During WWI, the animal fats that were still used to make soap were in short supply, so chemists in Germany created a cleaning chemical made from synthetic, as opposed to natural, ingredients. The result? The first detergent.

Proctor & Gamble's labs resurrected the detergent idea in 1943. The laundry 'soap flakes' they had been selling turned both white and color clothes grey-ish. They improved the 'synthetic surfactants' by adding phosphate compounds and other enzymes. The result was Tide®, which could penetrate greasy, difficult stains that soap and water alone couldn't touch. The product became so popular, especially in areas with mineralized or 'hard' water, that stores had to limit the quantity that each

housewife could purchase.

By the 1950s, detergents had replaced soaps for washing clothes in developed countries. In the '80s, detergents were developed that could clean in cold water. In the '90s, super concentrated liquid detergents came out, and in the 2000s, biodegradable, green-friendly products were released.

Today, even bar soap is not technically soap; It's a petroleum- or synthetic-based bar of detergent. Real soap is only available from natural-product companies.

Power washing becomes an industry

The first commercial high-pressure washing of buildings and vehicles in the 1960s went back to basics — just water, the hotter the better. But specialized detergents evolved, as well as the ability to inject cleaning chemicals into the water stream.

However those chemicals were often caustic, removing paint as well as the dirt.

In the 1980s, pressure washing contractor John Allison began developing safer, more effective detergents in a home-made lab. By the next decade, he had figured out how to defy the laws of chemical compounding by developing super-concentrated SuperFlo Polymer.™

The environmentally-friendly detergents made from that formula were an immediate success among cleaning contractors throughout the country. Now, his company EnviroSpec offers a family of cleaning chemicals for every possible need, having made a huge impact on the mobile power wash industry, and leaving everything from houses and trucks to commercial kitchens and gravestones looking newer than they actually are.

Sick kids, abandoned pets and jobless veterans want to thank you.

Why? Because when you buy a drum pack of **chemicals from EnviroSpec**, 100% of the profits go to charity work that benefits those in need. So you're contributing to society simply by purchasing the most powerful cleaning detergents available. That's what they call a win-win.



A new career for a U.S. vet.



Members of the military sacrifice for their country in all kinds of ways. But when they return to civilian life, they often find no job or career opportunities waiting for them. However one lucky veteran recently received a free **Business Start-Up Package** worth \$8,000 from the **EnviroSpec Washin' Warriors Project**. Setting him up as a mobile wash contractor included providing him with equipment, chemicals, parts, and ongoing training. And he was just the first of many.

All they want is to grow up normal.

Is there anything sadder than an innocent child with a serious medical condition? On December 1, EnviroSpec presented a check for **\$20,000 to the Shriners Hospital for Children**. Those funds will go toward treatment of orthopaedic deformities, and neuromuscular conditions like cerebral palsy, when families can't afford the necessary procedures. Of course, improved health leads to self-confidence and a promising future.

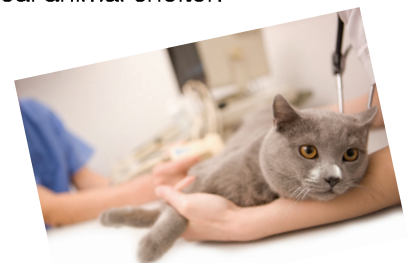


Rescuing homeless dogs and cats.

Suzie's Friends is a no-kill animal sanctuary in Homerville, Georgia founded by **EnviroSpec President John Allison** and his wife Shelley. Many abandoned, hungry, and often sickly animals come through its doors, and receive the loving care and medical attention they need. Once recuperated, permanent homes are sought for these sweet canines and felines. Naturally, there are animals in need in every town, so consider volunteering at your local animal shelter.

The spay-and-neuter mission.

In addition to their work at Suzie's Friends, John and Shelley Allison have brought in **over 3500 cats and dogs** to be spayed/neutered, thereby reducing the future population of helpless stray animals. The funds for this much-needed and humane program also come from contractors like you who purchase chemicals from EnviroSpec.



Find out more at EnviroSpec.com.

While you're learning more about our **Soap for Hope** charity programs, be sure to also explore our huge online product catalog. Smart mobile wash professionals know to start here for everything they need.

EnviroSpec Your Authority for
High-Performance Cleaning

envirospec.com 1-800-346-4876

100%

of the profits from our
Detergent Formulary Division
are donated to Charities for Children & Animals





PINE STATE POWER WASH

our featured

HOUSE WASH CONTRACTOR

My name is Chris Case and I own Southern Maine based **PINE STATE POWER WASH, LLC.**

You might be familiar with my last name. I hope you are, and I hope some of you have had the opportunity to either work with or got to know my father, Peter (aka Dr. Pete).

I started my business in September of 2011 after 12 years in the law enforcement field. I worked in central and southern Maine during those twelve years.

When I was in high school, I had the opportunity to work at EnviroSpec for John Allison. I mixed detergents, did shipping and later answered phones (back when the phones were the primary way of ordering!).

I had always kicked around the idea of starting up my own business. My dad owned and operated Hi-Tech Mobile Wash out of central Maine from 1988 until he sold the business in 1999.

My wife and I decided that I should go for it in August of 2011 and in the middle of September we dove in.

I had done some carpet cleaning as a supplemental income and decided to incorporate that into my pressure washing business. I started out on a shoestring. I bought a used Ford one ton van, a Hydro-tek pressure washing trailer (that I got a steal on because of a loggers convention in Maine) and took the trailer apart and mounted it in the van.

I had a 200 gallon water tank,

two inexpensive hose reels, and a bunch of equipment (hoses, trigger guns, lances, detergents, nozzles, etc) from EnviroSpec. I went to work for less than \$15,000.

I quickly outgrew the van and upgraded to a GMC cab over diesel with a 16' box and added two 275 gallon water tanks. This allowed me to fill up at some of my truck accounts before going to the isolated parts of their lots to wash trucks instead of running 500 ft of garden hose.

Being in Maine, we have many opportunities for the professional mobile washer. Obviously our distinct four seasons make for very different types of work from month to month. The snowy, sandy and salty roads keep me busy with trucks throughout the year.



Also, our humidity creates mold and mildew issues on vinyl and cedar surfaces of homes as well, especially on the rocky Maine coast.

The summer months were full of vinyl restoration. Of course, using the "old school process" that I grew



up learning from Dr Pete, I did things differently than most people who clean houses.

I restored vinyl, using heat and Prodigy, removing mold and mildew, as well as oxidation. When I say I use heat, I never use extremely hot water. The actual temperature of the water is determined by the weather conditions.

Unless it is extremely hot outside, using warm water is advised because it makes your house washing detergent work better. It is important to remember not to allow detergent to dry on surfaces, especially windows.

Weather conditions play a huge factor in how fast things dry. Hot weather, bright sun, dry conditions and wind all change the speed in which detergent will dry on a surface. Anyone who thinks washing a house is simple is fooling themselves. Weather is just one of the extreme variables encountered. Other variables are surface type and condition, detergent strength, and cleaning pressure applied.

This cleaning process can be water pressure or manual surface agitation, which is sometimes necessary for some types of cleaning (i.e. streaks on gutters).

Unless I have someone specifically request it, I do not "soft wash" houses. Soft washing is the process of

applying sodium hypochlorite (12% bleach) on vinyl at low pressure, letting it dwell for a period of time, then rinsing also with low pressure as well. I attempt in all ways to keep the process green by using detergents that EnviroSpec sells that are environmentally safe. I've had

amazing feedback from my clients about how the restoration and environmentally safe techniques have made them my customers for life. Many of these customers will pay the extra money to have me take the time to use high pressure and green detergents when restoring their vinyl.

Keep in mind, sodium hypochlorite is very strong and if you aren't careful it can damage vegetation and the smell can be offensive to clients.

My company's largest and most exciting job of the summer was an amazing cedar wood restoration in "down east" Maine. It was three large buildings that sit on two miles of the Maine coast. As you can see from the photos, we applied Restore by using a

15 gallon, 1.5 GPM electric pump. We then used appropriate pressure with warm water to rinse off the darker stain and begin the process of fully restoring the wood to its original color. Anyone who has done any wood restoration knows the importance of "fanning" the contact points to make the process even.

Appropriate pressure is very important, especially when restoring cedar. Appropriate pressure is determined in the field, by quickly assessing how much pressure any given surface can withstand without incurring damage. The appropriate pressure also provides for optimal restorative results. In other words, if you're too far away, you're not going to clean it, but if you're too close, you'll damage it.

The results were dramatic and the owner was thrilled with the way his buildings look. So thrilled that he has decided to leave the cedar natural and have my company return every year to restore them as his siding maintenance program.

I was able to get some pictures at the site of Dr Pete doing some wood restoration as well! These buildings were very large, two being over 3000 square feet, the other being about 2500 square feet.

We did this job in September and the weather was practically perfect. It was in the 50's and 60's and

sunny. We were very lucky. Additionally, because the job took more than one day and was a long way from home, we rented a house on the Atlantic Ocean.

We also went to a local tavern that had great pub food and live Irish music. Patrons were actually doing Irish jigs all around the bar. Dad enjoyed it thoroughly, while I thought it was strange that they were dancing too close to the door for us to exit.

As I said, Maine and the northeast offer many opportunities for our industry. Professionalism and communication are HUGE. I cannot stress this enough. Tell your clients what you're capable of.

I was outbid several times, but by explaining my process, then telling the clients what kind of detergents I use, I got the jobs over the sodium hypochlorite competition.

As John said in one of the articles in the last issue of PowerWashPro, we, as contractors know the business the best. Homeowners need that reassurance when they're trusting us with what is most likely their most expensive asset. Make sure that you look at a property well when you bid on it. Look for any issues that may cause you to spend more time or need extra equipment (i.e. a high pitched roof and a ladder hook or a lift).



If nothing else, it's your opportunity to show a client that you're looking at and/or seeing the whole picture. It also shows that you know what you're doing.

Doing high quality work is the best way to get both repeat business and open the door for new opportunities. Be very aware of your clients wants and needs and know how to address them and answer their questions.

I promise you, the neighborhoods where you make the most money have houses owned by people who will refer you to others.

Christopher C Case
PINE STATE POWER WASH, LLC

My FedEx STORY

by John Allison
EnviroSpec - www.envirospec.com



I just have to share this story with you. It is about you, me and everyone else who stands in front of a potential customer.



We have always shipped all of our products by UPS but like everyone else we are always looking to cut cost. A few years back I was contacted by FedEx ground to see if I would be interested in giving them a try. I agreed and over a period of 3 weeks they brought in new computers, scales, printers and sent reps out to train our shipping department on their software. The next Monday came and the FedEx drivers appeared to pick up our packages. *No lie!* The male was about 50, belly hanging over his shirt that was not tucked in (no uniform) and the girl was wearing shorts and 'flip-flops' - yes - *flip-flops.* As I stood there 'gawking' in disbelief I had this bad feeling that someone looking like this was going to show up at my customers place of business and I just couldn't do

that to them. I called my FedEx rep and told him what happened and for them to come pick up their equipment.

Time passed and a couple of years after that the same rep came knocking. Everything had changed and they would like for me to re-consider using their service. The price was right so I did. After another installation of equipment and training the first pick-up day came. Folks - you just had to be there! In walks the driver wearing 'sweat pants' and had a 'load' of snuff 'between his cheek & gum' that would have choked a mule. This is where the story ends but what a lesson learned. What do you look like when you show up?

STEP #1: EDUCATE YOURSELF & YOUR CUSTOMER



Do you use any of these products to
WASH HOUSES?



SODIUM HYDROXIDE

is the **ACTIVE** ingredient in many products that contractors are using to wash houses!



All of these products are
EXTREMELY CORROSIVE!



So now that you have learned **STEP #1**

you can easily explain to the homeowner why your service is safer and will produce better results. Just keep in mind that doing it the *right way* will take you longer. Where some contractors brag about 'blowing off 3 to 4 houses per day' you may only be able to wash one the *right way*.

As you are speaking with your prospective client be sure to mention that when you finish you will leave behind a safe environment. This is very important to the homeowner especially if they have children, grandchildren, pets or want to plant flowers any time soon.

STEP: 2 NOW LOOK THE PART

WHEN YOU SHOW UP

- Show up with a clean, well organized vehicle.
- Show up wearing a 'button-up' uniform shirt.
- Show up with pictures and testimonials. *and above all else...*
- Show up with all of your MSDS Sheets.
- And ALWAYS leave the Tri-Fold on pages 14 & 15.



TECH TALK:

by John Allison
EnviroSpec - www.envirospec.com

CORROSIVE PRODUCTS BEING USED AS HOUSE AND TRUCK WASH DETERGENTS



TERM: The word 'corrosion' is derived from the Latin verb *corrodere* which means 'to gnaw' indicating how these substances seem to 'gnaw' their way through the flesh. A corrosive substance is one that will destroy and damage another surface or substance with which it comes into contact. The main hazard to people include damage to the eyes, the skin, and the tissue under the skin; inhalation or ingestion of a corrosive substance can damage the respiratory and gastrointestinal tracts.

This is what sodium & potassium hydroxide will do to skin & eyes. Do we really want to leave this stuff behind after we complete the job?



Don't forget to leave the EnviroSpec Tri-Fold that has closed more House Wash deals than there are house washers!

More details to follow.

SMART HOMEOWNERS GUIDE

Protect Your Home:

5 things you must ask your house washing service



Smart tips from EnviroSpec

How do the best house washers wash houses? Here's how.

Surface Washing Methods

Wash a house with the intention of removing pollutants, surface oxidation, as well as removing mold and mildew. By doing so you provide customers with a superior result, and make 'splash & dash' competitors look like amateurs. 'Splash & dash' refers to someone who "splashes" bleach or dish washing detergent on the house, gives it a quick rinse, then grabs the check and leaves.

There are various levels of clean, and various qualities of work. Quality contractors use a pressure washer rated from 4 to 6 GPM and from 1500 to 2000 PSI. You'll also need an *Allison Super Suds Sucker* chemical injector, a quality house wash detergent, a surface sealer, a brush, and extension pole.

Washing a house with a pressure washer is accomplished in four steps. The four steps are: detergent application, high pressure rinsing, surface sealant application, and another high pressure rinse.

Detergent Product

For washing most types of siding, use *Limonene* or *Premier* from EnviroSpec. If you are working on a house that is heavily covered with mildew, use Emulsifier Plus with a little added bleach.

Detergent Application

Apply the detergent concentrate through your Allison injector. Always apply detergent from the 'bottom-up,' and high pressure rinse from the 'top-down.' Do not use an x-jet type nozzle because it will force detergent under the siding and create a high pressure detergent 'mist' that will saturate other surfaces in the neighborhood. An x-jet type nozzle is great for the splash & dasher, but because it is a high pressure nozzle it forces the cleaning solution underneath the siding where it will emulsify (dissolve) pollutants and cause 'streaks' as it drips out over the siding later.

Always adjust the strength of your detergent by running a test pattern in an inconspicuous area on the house, maybe behind a bush. One of the most common problems a house washer has is thinking that 'more is better,' and with some detergents more is indeed better—but not with EnviroSpec 'job-matched' high performance detergents. Always apply a detergent test to an area that is small enough so the product can be removed before it dries on the surface. Never allow any product to dry on glass.

Remember that once you have applied the detergent

you will be switching the injector from 'low-pressure detergent' to 'high-pressure rinse' and when you do, you will have a hose that is full of detergent. This means that for a short period of time the remaining detergent in the hose will be coming out under high pressure. While in this phase make sure that you 'clear' that remaining detergent onto the lower part of the house, such as the foundation. If you clear it 'high' you will be creating the same problems that you would have with an x-jet type nozzle as described earlier. Always avoid getting detergent on the roof.

Pressure Washing

You will need to pressure wash by 'pattern cleaning' in an overlapping method much like you would when spray painting a surface. Work from the top to the bottom. As the siding is cleaned, work slowly back and forth with the nozzle about three to eight inches off the surface. On heavily oxidized siding, try running with hot water, around 150 degrees. Hot water helps cut surface oxidation. A water temperature in excess of 150 degrees is detrimental to detergent performance. On the other hand, if it is extremely hot outside you should try cooling the surface with a high pressure spray of cool, clean water so as not to create an 'alkaline shock' that could result in 'flash' oxidation—which creates a dull surface. After completing each section, rinse all windows thoroughly.

Clean the gutters at the same time as the siding. If the gutters are difficult, you should complete the washing process and then go back and 'touch-up' the gutters. To do this, use a pail with a small amount of detergent concentrate in it. Dip a brush on an extension pole into the detergent and "run" the entire gutter with the brush. Re-rinse the areas under the section(s) of the gutter that you touched up.

Surface Sealer

After completely pressure washing the siding, reverse direction and apply *Plex Master* surface sealer. Apply and rinse one side of the house at a time until completed. This treatment will take about 20-30 minutes to complete on a 2,000 s/f house. Again, do not allow the sealer to dry on the glass.



Dan Galvin's Journey: An American Success Story

A New Englander starts small, then learns how to build a solid power wash business.

By Allison Hester



Dan and his wife Heather

Dan Galvin spent a long time searching for the right career.

After high school in Plymouth, Massachusetts, he joined the U.S. Navy where he was a strike force team leader, a missile technician, and a rescue swimmer on board ships. He found the Navy a lot of fun, but knew it wasn't for him.

Next, he became a broker for the family insurance business. "I worked on my own but I had to wear a suit and tie every day. I was stuck in an office, and I absolutely hated it," he said. So in 2000, Dan went out on his own and started selling insurance software. "I was still stuck in a suit but, at least it got me outside, talking to people. But it still just wasn't me."

Lost on what to do next, Dan got a phone call from his uncle, who said, "Hey, do I have a deal for you!" The uncle had been in the pressure washing business since 1977 and was ready to retire.

Dan realized the offer might actually have some potential.

So Dan paid \$10,000 for "about \$2000 worth of equipment, including an old, beat-up pressure washer." But the main thing he was buying was his uncle's knowledge, which he knew was priceless. He also got his uncle's two accounts; one was for an electric company's vehicles, and the other was for graffiti removal at Fenway Park, home of the Boston Red Sox. "That was all I had. I think the monthly income was around \$500 between the two of them."

Dan's wife Heather was less than thrilled. "She said, 'How the hell are you going to make money with a garden hose?'" Dan laughed. "Like so many people, she was clueless to what power washing was and how to make money from it."

Dan said his uncle was the best around, but he didn't know how to mar-

ket to make that six figure income. "It took me less than three months to make my \$10,000 back, so my wife was happy," he said. "And that was with me having no clue how to market. I was ecstatic."

Growing and Changing

In the neighborhoods surrounding his home, Dan noticed a lot of vinyl houses that were moldy. So he hit them hard with a home-made postcard. "I was just spraying and praying," sending out postcards to anyone and everyone and praying he'd get some jobs.

By 2007, after buying out a couple of competitors, Dan's East Coast Power Washing had moved on to cleaning heavy equipment for large construction companies. Then the economy hit all those companies hard and he lost most of his accounts. So he had to go back to where he started...house washing.

Dan knew that house washing means



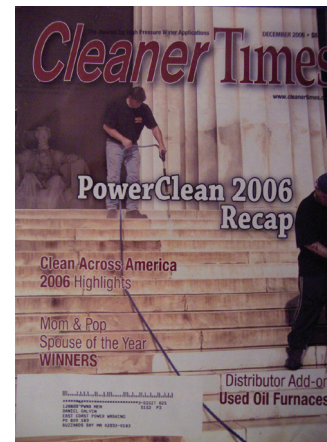
Spraying Fenway Park with a coating to protect it from graffiti



Cleaning the Jefferson Memorial in Washington D.C.



East Coast Power Washing in Plymouth, Massachusetts



a never-ending challenge to find and keep clients. He also knew he had to be 'different' than all the other power washers in the area. Dan had learned from an article in the EnviroSpec 2002 Catalog that the use of 'proper cleaners' was huge to house washing clients. Dan says, "I wasn't selling power washing, I was selling safety! You can't use the word 'chemical,' which scares people; you need to say something like 'cleaning products.'"

Dan knew he used the best cleaners, because they were from EnviroSpec, and he knew he did the best job around; but that alone did not get him the number of clients he wanted. Then when he was attending a marketing class he heard a phrase that changed the way he thought about selling his services.

The Quote: "If you truly believe that you have the best product or you do the best job, then you are doing your prospects a total disservice by not convincing

them to use you. If you don't have the best product or service, *change it*, so you do have the best product or service."

"That hit me like a ton of bricks" says Dan. "I knew I did the best job around, but never realized I was hurting people by letting those 'splash and dash' power washers sucker those people in on price alone."

That's when Dan figured out that he was now a consumer advocate in the power washing industry. He says "It all stems back to that 2002 EnviroSpec catalog. That catalog helped me lay the foundation of my business; I just didn't know it at the time."

A Competitive Advantage

The one product that EnviroSpec introduced Dan to that has made him hundreds of thousands of dollars, and has put him in the top 10% of power washers in the country, is Plex-Master. It's a surface

sealant with mildew formation retardant that Dan applied after he washed the house, so he could guarantee customers that their house would be mold-free for one year. In an area where mold will typically start growing on a house in as little as one month after it's washed, Dan was guaranteeing no mold or mildew for a year! This easily set him apart from other power washers in his area.

Dan tells the story of a house he washed, where the next-door neighbor was also washing his house the same day. "I finished washing and sealing the entire house with Plex-Master in a little under two hours. The neighbor had taken two hours just to wash his garage! He yells over to me, 'hey how do you do that so fast?' I said I have the right equipment and use the best soaps. He said, 'soap?' I just shook my head and walked away. The next year, after the neighbor saw that the house I cleaned still looked good, he

called me to wash *his* house.”

In 2008, when most companies were downsizing or going out of business, Dan's wife Heather joined the East Coast team, and the company's residential business boomed. In fact, Dan says that with the help of EnviroSpec's informative catalog, their soaps, and Plex-Master, he has made well over a million dollars.

As his company has grown, so has his ability to give back. In 2006, Dan participated in the “Clean Across America” project, cleaning around the Lincoln Memorial. Every year, his company donates community service projects, including the cleaning of local schools and churches. “We spend about 40 to 60 man-hours in giving back. I truly believe that giving back helps you grow.”

Power Washers of North America

On the advice of his uncle, Dan had joined the PWNA (Power Washers of North America) and attended his first convention in 2005. “I learned more from two days at the convention than I did the two years I was in business. I became absolutely hooked.” It was at that first PWNA meeting that Dan realized power washing was an actual industry. “I didn't realize there were thousands of other power washers out there doing the same thing, struggling with the same struggles I was having.”

At dinner one evening, Dan met Daryl Mirza. “I was in business for two years making \$250,000 and thinking I was doing really well. Then Daryl mentioned that he had 500 employees. Wow! I never even fathomed the idea that there could be a nationwide power washing company,” Dan laughed. “So you go from little corner store to nationwide. The connections you make through PWNA really are incredible, and everyone is there to help everybody.”

Dan was later elected to the PWNA Board, and then served as President from 2008 to 2010.

Finding His Company's 'Sweet Spot'

During the 2010 PWNA conference,

several million-dollar producers participated in a panel discussion where they mentioned finding your company's ‘sweet spot’ – the place where you are making the right amount of money for you.

Dan said he is currently in such a place, and struggles with the idea of whether or not to grow the business. “I would like to grow, but my wife is really comfortable right now,” he said. “She likes it where we can go away when we want to go away.”



One of Dan's biggest focuses is getting systems in place so that the business will continue to run without him. In addition to the need for the right systems, Dan offers this bonus tip: “If you want to make a profit and be successful in business, let your wife keep your books.”

Marketing Makes a Difference

Dan has also written a consumer guide called *7 Costly Mistakes Even Smart Homeowners Make When Hiring a Power Washer*. He gives it to his higher-end clients for free. “The book

is a marketing tool. For one, it gives you instant credibility because you wrote the book,” he explained. “Just one more tool that puts you heads above every other power washer in the area.”

“I've spent well over \$50,000 to educate myself on marketing,” Dan says. “How to speak properly. How to speak to customers. What to put in postcards to customers.”

In late 2010, Dan began a program to give back to an industry that has been so good to him and his wife. SuccessInPowerWashing.com teaches pressure washing company owners how to get more leads, separate their company from their competition, use technology and the internet, and double their income without adding more clients.

Teaming Up to Educate

To further help in training contractors, Dan has teamed up with John and Shelley Allison of EnviroSpec. “John and Shelley have an amazing love for this industry; they know if you educate the contractor, the contractor will become more successful, and in turn the industry becomes more successful. It's not about the money with John and Shelley; their rewards come from the success of their customers. They are the most amazing people I have ever met.”

Dan will teach the step-by-step systems he used to take his power washing business from zero to \$250,000 in less than three years. He'll offer to-the-point marketing ideas that contractors can take home and implement immediately.

“There's enough business out there for everybody if you are educated,” Dan says.



Dan with James Malinchak, star of 'ABC Secret Millionaire'.

SEPARATE YOURSELF FROM THE PACK!

SMART HOMEOWNERS GUIDE

Protect Your Home:

5
things you must ask your house washing service



As you hand them your **ESTIMATE** also hand them **THIS TRI-FOLD.**

When you do it's all over!

If you don't wash it...
...no-one will!

AN EDUCATED HOMEOWNER

will always choose a quality contractor like you over an unprofessional low-baller. So how do you educate them? Just give them a copy of this...

HOMEOWNER'S SMART GUIDE, "5 things you must ask your house washing service."

When customers ask these important questions, you'll be able to give the right answers -- while your low-balling competitor will just have to shrug his shoulders...*and walk away.*

Protect your home: 5 things you must ask your house washing service

1 Do you use bleach by itself to wash the house?

Bleach is often used as a cheap and ineffective cleaning chemical by house washers. It can degrade siding and roofing materials, and certainly isn't too good for grass, animals and other living things in the environment.

However when a bit of bleach is properly mixed with a high quality house-specific detergent like *EmulsifierPlus*, risks are greatly minimized. In addition, the gloss enhancers contained in that detergent will make your home look bright and new.

Also be sure your house washer is not using caustic chemicals on your home, such as sodium hydroxide and potassium hydroxide. These are the active ingredients in *Drano*, *Easy-Off* and paint strippers. And of course you don't want them to remove the paint along with the dirt!

SMART HOMEOWNERS GUIDE

2 Are your detergents environmentally friendly?

It's your property--of course it should be left free of residual chemicals. You need to be sure up front that lawns and shrubs are not harmed by contaminants, not to mention children and pets.

However, even when you ask, some house washing companies will assure you that their cleaning materials are "biodegradable." That's not good enough! Given enough time, even your house itself is "biodegradable."

Or you might be told that their chemicals are "neutralized" after the job is done. At least, whatever hasn't already seeped into the ground. Wouldn't you rather they use detergents that are formulated to be 100% environmentally safe from the start?

A true house washing professional is as concerned about the local environment as you are. Leaving soil, greenery and underground streams exactly as they found them is their primary goal.

3 Have you reviewed your detergents' MSDS?

MSDS? What's that?

MSDS stands for 'Materials Safety Data Sheet'. This industry-standard form includes information about ingredients, properties, handling, potential risks or hazards, and instructions in the case of accidental spills.

Would you hire a house washing service that hasn't reviewed the MSDS info for every detergent product they use? Neither would we! Unfortunately, most contractors in the industry have no idea what ingredients are in the products they use.

As an added precaution, also ask your house washing pro if they first test their cleaning products on a small, hidden part of the house surface, to be sure there is no unexpected reaction or other issue. You don't want to find out about a possible problem after the job is done.

4 Do you *only* remove mildew?

If your house washing contractor just removes mildew, they're doing a very small part of the job.

To remove mildew most contractors use bleach! Just remember—*bleach is a corrosive!* The term 'corrosive' means 'to gnaw' indicating how these substances seem to 'gnaw' their way through other surfaces (especially flesh). Remember, they are there to wash your *house* and not a load of clothes.

There are much safer and more effective ways to wash a substrate. A well structured, 'alkaline detergent bed' will kill the mildew and penetrate to the roots. Although bleach will remove surface mold/mildew it does very little to remove the more prevalent pollutants such as carbon monoxide, particulate matter, nitrogen dioxide, sulfur dioxide and lead.

We often hear people talk about 'sowing seeds.' With this Tri-Fold that is exactly what you will be doing...

You will be sowing or planting seeds in the consumers mind that will force them to make good decisions when it comes to who is best equipped and the most knowledgeable and who can best wash their home - *safely*.

These are the exact seeds that I planted in my prospects mind when I was washing houses in the 70's & 80's and I closed 8 out of every 10. And I did it at 3 to 4 times the price my competitors were charging.

5 Will you apply a surface sealant to protect my home?

The best house washing companies don't just clean the home's exterior—they also apply a layer of protection to retard mildew, oxidation and general 'fall-out' pollutants. The product that they use to insure that your home remains 'spotless' for many months to come is called *PlexMaster*.

Applying this invisible shield ensures a long life and a fresh appearance for your house. All surfaces, including windows, will be protected. Yes, windows too! *PlexMaster* also makes it possible for the home owner to simply take a garden hose and 'quickly' rinse the siding and windows to keep them crystal clear for up to a year! Annual *PlexMaster* protection agreements are available at a fraction of the initial house wash cost.

EnviroSpec.com

Published as a service for responsible home owners by EnviroSpec, a leader in providing safe, premium-quality products for the professional power wash industry.
Info@EnviroSpec.com © 2013 EnviroSpec

We've made it so much

EASIER

for you to win out over the local...

Low Ballers!



To order these professional
'HOUSE WASH CLOSERS'

Call 1-800-346-4876
or visit www.envirospec.com
Part # HWTF - 100 per pack

by John Allison
EnviroSpec - www.envirospec.com

The Industry's #1 Selling House Wash Product FOR OVER 30 YEARS AND COUNTING ALL WITH HIGH GLOSS ENHANCERS

Heavy Mold & Mildew

Lim^onene

Contains Mold Destroying...

**d'LIMONENE
CITRUS PEEL EXTRACTS** TM

along with

Gloss Enhancers

**Since its introduction in 1994
Limonene has been our industry's
#1 SELLING HOUSE WASH**

**This is a product that you have to
TRY and SEE simply because
you could never imagine...**



**...THE POWER OF
CITRUS PEEL EXTRACTS**



BLEACH FRIENDLY DETERGENT
CONTRACTORS know that bleach
only removes surface mold and mildew
so when it comes to killing mold and
cleaning carbonaceous hydrocarbons,
acid rain and general 'fall-out' dirt,
that bleach alone will not do the job.
on the power of...

EMULSIFIER

with Gloss Enhancers

Mix 1-Gallon of bleach with
Emulsifier Plus for tough stains
when bleach has to be used.

Products PRINTING

Call and Listen



to what our customers have to say!



according to Dan Galvin

this is the icing on the cake!



Read the article about Dan in this issue and see how he has turned an ordinary occasional house wash into a million dollar business using *the invisible shield sealer...*

PLEX-MASTER

Surface with
PLEX-MASTER

& without

On a typical 2,000 s/f house this is about a 20 minute process. Simply apply PlexMaster through your down-stream injector and rinse off immediately before PlexMaster dries. We recommend doing the house in 4-6 sections. This product goes on over windows and rinses freely.

Most people want their house washed before they pay the Window Cleaner. When you use PlexMaster a window cleaner is not necessary because in addition to PlexMaster leaving a protective barrier that will last up to one year it *also* leaves the windows 'sparkling clean.'

When you are done put them on your calendar to call next year for the follow-up re-seal that you will charge \$149.95 for another 20 minutes work!

ENT
at BLEACH
and mildew
the roots and
hydrocarbons,
ut' pollutants
ouch they call



PLUS
ancers

ch with 4-gallons of
he best of all world
e a part of your MIX.

see these products and more at
www.envirospec.com/MSDS.htm

A new prospect calls you up. Then what?

Here's a guide to what you just might say for the best chance of getting the job—even if you charge more than the other guy.

Your cell phone rings, and you answer:

"Thanks for calling Midville Housewashing."

"Hi, I'm calling to get an estimate on having my house pressure washed."

"Great, who is calling please?"

"This is Judy Jones."

"Ms. Jones, this is Jack Johnson. If you can help me out with a little information, I'll explain what we can do for you." (Always use Mr. or Ms. when addressing a customer, as a sign of respect.)

"Now what style home do you have, Mrs. Jones?"

"It's a raised ranch."

"Okay, and what type of siding is it?"

"Aluminum."

"Has it ever been cleaned before, Ms. Jones?"

"I don't think so. We've been here since 1994 and I know we haven't cleaned it."

"You must be getting a tremendous amount of oxidation or chalking on it by now."

"There is! In fact, we were planning on washing it ourselves last year but just never found the time."

"Now that I have this information Ms. Jones, let me explain our service. First, we utilize very sophisticated equipment and detergents made exclusively for the exterior house washing industry." (Don't use the word 'chemicals' due to that term's negative associations.) "Before starting the job, we run test patterns so you'll see exactly what the clean siding will look like. If for any reason it doesn't meet your expectations, the only charge will be a \$35 service fee. I'm sure you would much rather proceed like this, instead of having someone come in, wash your home, only to be dissatisfied, right?"

"Right!"

"You should know that in some situations where surfaces have been neglected and not cleaned at proper intervals, or cleaned with harsh chemicals, the surface may not be sound enough to look like new, even after it's been cleaned. But regular cleaning with the right detergents in the future will really help preserve the look and value of your home."

"I understand."

"Because believe me, your being happy with the job is more important to me than making money from a dissatisfied customer. Now, I also want you to know, assuming that you give us the go-ahead, that we never use detergents or other products that could

harm lawns, shrubs, soil, pets or children. Everything is environmentally safe, because after all, it's your home, and that's important to you." (Here of course, you're creating a 'bond' by showing that you care about the same things they care about.)

"I'm sure, if you've shopped around, you've heard other companies say that their cleaning products are biodegradable. The fact of the matter is, Ms. Jones, given enough time, everything is biodegradable, even your house!" (Often you'll hear a chuckle at this point, indicating that you've made your point.)

As you continue your sales presentation by phone, be sure to allow the homeowner to comment or ask questions; the more interaction there is, the more likely you'll make the sale. Take their considerations seriously, and acknowledge them for asking good questions.

Then continue: "Now just so you know, we start out with the exterior gutters and work our way down to the foundation. We remove all surface oxidation, acid rain, pollutants and mildew. Then when we're through with the cleaning process, we apply a Plex-Master surface sealant which is manufactured from the same chemical family as Plexi-Glass.™ This has been specifically formulated to protect your house and retard future mildew and oxidation. Then before leaving we'll insure that porches, steps, walkways and driveways are rinsed clean of any solutions."

Chances are, the homeowner hasn't heard this level of caring detail from your competitors. So when you present your estimate, she'll understand how much more she's getting for her money.

Keep in mind of course that this phone sales dialog is just a guideline; you don't have to follow it word-by-word. It's intended to create ideas and give you a track to run on when talking to prospective customers.

But if you follow the main principles, adapting them to your own business, you'll learn to become persuasive enough to close on many more jobs than you lose. In fact, by 'planting the seeds' of what an informed homeowner should expect, she will be better able to resist the low-ball estimates of less-reputable contractors.

And of course an educated homeowner will benefit by using a hard-working professional with the knowledge and products that will serve them well for years to come.

Isn't that the kind of customer where future referrals come from?



So why do so many contractors use CORROSIVE PRODUCTS TO CLEAN?



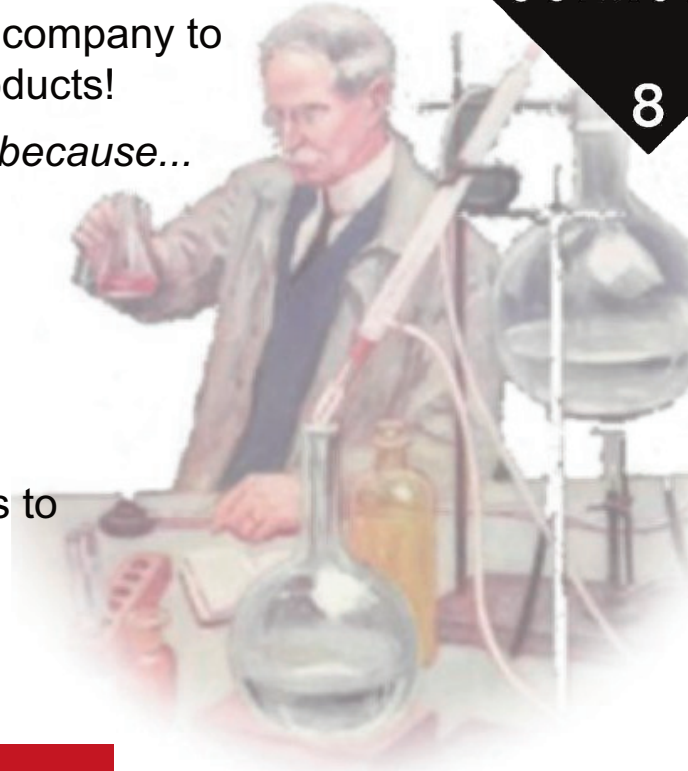
Contractors are not CHEMISTS...

...so they rely on the chemical company to help them choose the right products!

But there lies the problem because...

...chemists are not CONTRACTORS

and this means that all they know is to blend a 'little of this' with a 'little of that' and then pass it along to the contractor and hope it works!



A Professional Contractor knows

and understands the Material Safety Data Sheet that is supplied by their Chemical Manufacturer. They know that when they see either of these two products - *Sodium Hydroxide* or *Potassium Hydroxide* - that these are not products recommended for cleaning but rather used to remove baked on grease, paint or opening clogged drains.

SOME JUST DON'T CARE!

Some contractors will use the product regardless for one or both of the following reasons:

1. Compounding a product using these two ingredients is relatively inexpensive and therefore cheaper to purchase.
2. Just by the reactive nature of these products they work extremely fast but as they are removing pollutants they are also removing microscopic layers of paint as well as inflicting irreversible damage to the surface.

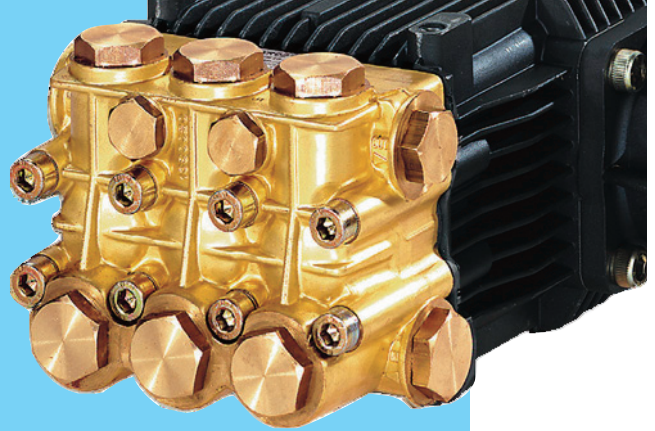
So what is the answer?

Deal with a company who was a contractor just like you and one who developed professional cleaning detergents on actual job sites rather than in a lab by someone who never had to make a living using the products they send to the marketplace.

Who is that company!

**EnviroSpec
and we have been
doing it for over
40 years!**

PUMP SET-UP



Why & How to Nozzle Your Pump

by John Allison

EnviroSpec - www.envirospec.com

What does 'NOZZLING A PUMP' mean?

Typically when a new pump is installed the same nozzles that came with the machine which could have been the wrong nozzles to begin with are the ones used on the new pump.

Knowing how to nozzle the pump is the first step in knowing how to maintain your own equipment. You should learn this because experience tells me that most pressure washer distributors seldom get it right.

Let's say you buy a 5.6 GPM 3,500 PSI pump. The first thing you want to do is determine the exact nozzle that it will take to produce these specs. When you look at the nozzle chart it tells you that a number '06.0' nozzle is the one you should use. So let's see if that is right. Most times it isn't. Manufacturer's have been known to occasionally over state the capabilities of some of their pumps.

Before you start this procedure remove your chemical injector and hook up your hose and gun and install that new '06.0' nozzle.

Before starting the engine always **turn your unloader down** to where you will be getting very low pressure once you fire off the engine and pull the trigger.

FIRST:

With the trigger gun in the open position start to turn the unloader adjusting knob slowly to increase pressure. Watch your gauge closely. When you get to a point where the gauge needle stops moving you **STOP** turning. At this point this is the absolute most you will be able to get out of this pump with that nozzle.

REMEMBER:

We are trying to find the perfect nozzle that will give us the manufacturers advertised specifications. So if the nozzle chart says a 06.0 is the nozzle needed to get 5.6 @ 3,500 psi and the gauge needle stopped moving at 3,100 PSI this means you have the wrong nozzle for your set-up. If the pressure is to low you will need to install a smaller nozzle. In this case try a '05.5' nozzle. If the pressure is to high you will need to install a larger nozzle.

Considerations for problems:

If you can't get the pressure with the nozzle that is recommended for the advertised pump specifications here are some possible reasons why.

1. The manufacturer has over rated the pump and you are not getting 5.6 GPM. TS2021's always seem to be in the 5.3 GPM range.
2. The engine speed is not correct. (See 'Engine Speeds' article)
3. You have the wrong pulley sizes on the machine. (See Pulley/Gear article)

To maintain your equipment properly you must have a few, low cost tools. Here are the ones you will need when nozzling a pump.

1. 2 (not 1) pressure gauges just in case one is giving you a false reading.
2. A tachometer on your engine. This is so easy to install that everyone should have one.

NOW - the most important thing you **MUST** learn is this. Never - ever touch the unloader again! Once you have nozzled the pump correctly **ALL** pressure adjustments from here on out should be done by using a **LARGER** nozzle only. Why Larger **ONLY**? Because when you determined the correct nozzle by finding out the absolute smallest nozzle required to obtain the correct specifications - anything smaller will over pressurize or 'red-line' the pump. Once you have nozzled the pump correctly that is the smallest nozzle you should ever use. A good rule of thumb is if you are using a 05.5 nozzle and it is giving you 3,500 PSI on a 5.6 GPM pump and you install a 09.0 nozzle the pressure will drop to around 2,000 PSI and your GPM will remain the same. If you try to adjust the unloader to reduce the pressure then you are also reducing the GPM. Using the unloader to adjust the pump to 2,000 PSI will by-pass around 1.5-2.0 GPM.

EVERY HOUSE HAS A DIRTY DRIVEWAY

...and when you forget to include this service in your proposal you have just missed a market and left a 'pile of money' on the table.

Equipped with the right tools like a **Mosmatic Concrete Cleaner** (below) the professional mobile wash contractor will have countless opportunities each week to increase sales. Cleaning residential driveways and walkways is by far the easiest sell and most profitable services a professional contract cleaner can perform.

Just tell your client that a clean house and a dirty driveway is like putting on a new suit and a 'dirty' pair of shoes.'



2012'S MOST MISSED MARKET

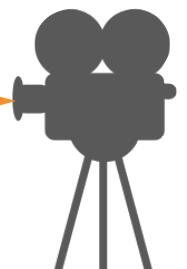
by John Allison
EnviroSpec - www.envirospec.com

**HERE IS ANOTHER
GREAT IDEA!**



Banks have billions tied up in foreclosed property. Why not find the individual at the bank who is in charge of unloading these properties and present the idea that a 'sparkling' house with a 'like new' roof, siding, driveway and walkway will bring many thousands more than one that looks rundown and filthy. - Good luck ☺ John

You will enjoy our video selection under
SURFACE CLEANERS
watch them at www.envirospec.com



TECH TALK:

by John Allison
EnviroSpec - www.envirospec.com

FIGURING HORSEPOWER REQUIREMENTS

The first thing you need to know is how to determine how much horsepower you will need to drive your pump.

How to figure horsepower requirements: Let's say you buy a pump that is rated for 4,000 PSI and 5.5 GPM and you want to know how much horsepower you will need to obtain those numbers. Here is how you determine what engine you will need.

If you have a gas engine...

PSI X GPM ÷ 1100 = THE HP YOU WILL NEED.

Example: 4,000 PSI X 5.5 GPM ÷ 1100 = **20 HP**

If you have a diesel engine...

PSI X GPM ÷ 1250 = THE HP YOU WILL NEED.

Example: 4,000 PSI X 5.5 GPM ÷ 1250 = **17.6 HP**

If you have an electric motor...

PSI X GPM ÷ 1450 = THE HP YOU WILL NEED.

Example: 4,000 PSI X 5.5 GPM ÷ 1450 = **15.17 HP**

Considerations:

If you have a belt drive system with the correct pulley set-up you could assume that if you have an engine that is rated for 20 HP @ 3,600 RPM (normal engine speed) that you have enough engine to produce the 4,000 PSI @ 5.5 GPM pump - example above.

But what if you are gear driving the pump? If you have bought a 1450 RPM Pump that is capable of handling 4,000 PSI @ 5.5 GPM that same engine (20 HP) is too small and here is why. Gear boxes have a ratio of 2.2 to 1 which means that 1450 X 2.2 = 3190 RPM. That means you will need to run the engine at approximately 3200 RPM so you do not 'red-line' the pump. If you run the engine at its full 3,600 RPM you will be turning the pump that is rated for 1450 RPM at 1636 RPM. (3600 ÷ 2.2 = 1636). So now how much horsepower will you need for this 1450 RPM pump when you gear drive it.

IF 3600 = 20 HP

20 HP ÷ 3600 = .0055555 x 3190 =

17.72 HP at 3190 engine RPM.

So now your 20 HP is only producing 17.72 HP because you are having to run it 'slower.' If you are ordering an engine simply order a larger engine. How much larger?

Use this formula:

PSI X GPM ÷ 1100 x 1.12 =

'will be the required horsepower rating'

that you will need for a 1450 RPM Pump
that you will be gear driving



BUT WAIT!

You already have 20 horsepower and are not ready to buy another engine - *and* you need ALL of the 4,000 PSI @ 5.5 GPM!

Simply buy a 1750 RPM Pump that will give you the pressure and a little more VOLUME.

Why more volume and how much more?

'Why more volume?' We have already determined that you need ALL of the 20 HP that your engine will produce at 3600 RPM (wide open.) And we have determined that with a 1450 RPM pump we can not run the engine at 3600 RPM. So, if we do the math using a 1750 RPM Pump and the gear box ratio is 2.2 to 1 you will see that 2.2 to 1 is 3850 RPM engine speed which is too fast for the engine. We are trying to get the GPM to 5.5 when running the engine at 3600 RPM - right?

So here is what we are going to do.

Find a pump with a 24MM (std) shaft that you can run at 1750 RPM and use this formula.

Take the desired GPM - 5.5 in this case - and multiply it by 1.07.

5.5 X 1.07 = 5.885 GPM

You probably won't find a pump with that exact specification but you will find a 6 GPM pump. Now - use this calculation to determine the actual GPM of that 6.0 GPM pump when you are running the engine at 3600 RPM.

6 ÷ 3850 X 3600 = 5.61 GPM

Close enough?

Not WANTED



SHORTY'S "SPLASH N' DASH"

WE KNOW YOU HAVE SEEN THIS GUY!

He's the guy who is roaming the neighborhoods all across America with a gallon of bleach and a toy pressure washer.

Yes, he disguises himself as a professional mobile washer and many homeowners are falling for his story.

He is the person who performs the job the first time around and then you are the one who has to go in behind him and try and 'fix' the damage he left behind.

He is gone now - out of

business for obvious reasons - but you are the ones who are left behind and you are the ones who are now looked upon by the consumer as just another 'guy with a pressure washer' and a 'silver tongue.'

So - what do you plan to do about 'THIS GUY?' Yes you do what every contractor for the past 40 years has been doing and that is - complain, bellyache, cry, make excuses and on and on but the bottom line is...

...THEY AIN'T GOING AWAY - and if you think they are you may as well...

...**THROW IN THE TOWEL!**

BUT YOU CAN BEAT THEM AND WE CAN SHOW YOU HOW!

Use the Tri-Fold found on pages 14 & 15

UNLOADERS FOR DUMMIES

by 'Master Dummy' - John Allison

If there is one thing I have learned in my 40 years as both a contractor and a supplier/manufacturer is that everyone who comes into this industry (including myself) wants to be a 'rocket scientist' or an engineer. Sometimes that is good - most times it isn't.

Believe me - there is NO rocket science required when it comes to a pressure washer. Water comes in and water goes out and with the exception of a few safety valves in between...

*THAT IS REALLY ALL THERE IS TO A PRESSURE WASHER
SO PLEASE DON'T COMPLICATE THINGS.*

I am not going to bore you (now) with the 'water in' and 'water out' on a pressure washer concept but I am going to give you the 'master dummies' lesson on unloaders which is one of those 'safety valves' I spoke of earlier. So sit back and don't bother taking notes. *It 'ain't' that hard folks!*

You have a machine that, with the trigger gun pulled, is running at 'whatever PSI' (doesn't matter so don't get 'bogged' down with any fancy calculations) and now you don't want water to come out the gun any more so you release the trigger. That water has to go somewhere or the pump could explode or lock up your engine. In order to keep this from happening you have an UNLOADER installed on the high pressure side of the pump head. When the trigger is released an internal by-pass valve goes into action and UNLOADS or 'by-passes' the water. The Unloader is now acting as a TRAFFIC COP and is redirecting the 'water traffic' to another location. It could be redirected back to the inlet side of the pump, back to a water tank or even the ground if you want.

SORRY - that is all there is to an unloader. Now, if you are like most, you will sit back and come up with at least 20 questions about unloaders. Which one should I buy, what color, what size, who makes it, etc. and the bottom line is this - **WHO CARES!** They all do the same thing. Yes, some will last longer and those are the only ones we sell.

My recommendation is to purchase a Compensating counter balanced unloader like the popular ALLISON COMP-838. This unloader has a very 'soft touch' and while most unloaders really hammer away at longevity of your equipment the '838' is very gentle.

LESSON #1 - OPERATING PRESSURE

That is the pressure that is being produced when you have the trigger pulled.

A TS-2021 Pump is rated for 3,500 PSI so your maximum operating pressure is 3,500 PSI. Right? WRONG! Your maximum operating pressure should be approximately 80-85% of 3,500 PSI or...

3,000 PSI!

Why? Because you have to allow for - *SPIKE PRESSURE*.

With the trigger gun pulled - if your operating pressure on a 3,500 PSI Pump is more than 3,000 PSI you will be OVER the manufacturers rating when you 'release' the trigger and factor in 'SPIKE' pressure which is what it UNLOADS at.

3,500 PSI Pump should be set to run no more than 3,000 PSI when the trigger is pulled.



LESSON #2 - SPIKE PRESSURE

We know that we know what operating pressure is but what is **SPIKE** pressure?

Well - that is the pressure that the pressure gauge 'spikes' or 'jumps' up to when you release the trigger!



I know you have a pressure gauge - right? If you don't no need to waste OUR time. Get one and then start over with lesson #1! That's like having a car with no speedometer and complaining when you get a 'speeding ticket.'

Now when you release the trigger watch your pressure gauge jump to a higher pressure. This is your **SPIKE** pressure.



SPIKE pressure should never be more than 15-20% of operating pressure. This means that if your operating pressure is 3,000 PSI then your spike pressure should not exceed a maximum of 15-20% or, in this

case, 450 to 600 PSI making your pressure gauge read no more than 3600 PSI with the trigger gun released.

Visit WWW.ENVIROSPEC.COM

for more great articles just like this that are written by John Allison and others who at one time had the same problems that you experience every day!

Hold everything!!!!

Are you the same guy who keeps calling in here saying that we sold you a bad unloader because every time you released the trigger the v-belt 'squealed' or the engine shut-down!

I thought so!

Why don't you just buy a pressure gauge?



ADJUSTING 99% OF THE UNLOADERS IN THE INDUSTRY

by John Allison

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First look at the body of the unloader and identify the markings. You will have an 'IN', an 'OUT', a 'By-pass' and around the adjusting knob a (+) and a (-).

Before you even think about properly adjusting an unloader you need to make sure your machine is nozzled correctly.

If you have a 5.6 GPM Pump that is rated for 3,500 PSI you have to remember the **spike** pressure factor under LESSON 2. You are going to use a nozzle that will give you 5.6 GPM @ 3,000 PSI. Go to your nozzle chart and you will see that will be a #06.5 nozzle size. Caution - do not get confused about the first 2-numbers on a nozzle. Those are the degrees or how wide or narrow the stream of water will be as it exits the nozzle. The last 3 numbers will be the nozzle size. For example: a 1506.5 nozzle is 15 degree with a nozzle size of 06.5.

Now - install the **NEW** nozzle and let's get to unloader adjusting.

1. The first thing you want to do is take off the chemical injector if you have one installed. Then place your pressure gauge between the unloader and the trigger gun. Before you crank the engine turn the knob on the unloader to it's lowest possible pressure - see (-).

2. Now crank the engine and get it to full operating RPMs. While holding the gun **OPEN** start turning the knob on the unloader toward the (+) direction and watch the gauge closely. When the gauge **STOPS** moving then you must **STOP - YES - STOP!** **DO NOT** turn that knob any more. If the pressure shows that you have **exceeded** what you have calculated to be the proper operating pressure then you need to use a larger nozzle size in order to bring the pressure back down. Using this example try a 07.0 nozzle instead of the 06.5 and see if it brings the PSI down to the proper operating pressure. On the other hand, if the pressure will not come up to that pre-determined operating PSI then you will need to install a smaller nozzle. In this case start by installing a 06.0 instead of the 06.5 nozzle size.

WHY am I having problems getting to the proper operating pressure. First you should know that some pumps are over rated by the manufacturer. For example; we have bench tested the TS-2021 pump many times and have yet to get one to produce more than 5.3 GPM at it's rated 1450 RPM although it is rated for 5.6 GPM. Having to reduce the nozzle size on this pump is normal.

Now if you understand how to properly adjust the unloader you will understand what happens if you keep turning the unloader adjusting knob **AFTER** you have already reached your operating pressure. You start **Red-Lining** your pump!

So what do you think will happen if you continue to turn the knob clockwise while the OPERATING PRESSURE stays at 3,000? All you are doing at this point is **SETTING** the **SPIKE PRESSURE** to an **UNSAFE PRESSURE**. I have seen **spike pressures** as high as **7,000 PSI** on a pump rated at only 3,500 PSI.

How does this happen? The most common reason is because the operator does not have a pressure gauge installed on their machine so they have to guess at the pressure. This probably represents 75% of all pressure washer problems. Over-pressurizing a pump you will destroy or reduce service the life of every component on the pressure washer.

At least once a week someone calls and tells us that when they release the trigger the belts on their pressure washer start to 'scream' and/or the engine shuts down. This occurred because they kept turning the unloader adjusting knob thinking the operating pressure would increase but all they were doing was setting the 'spike pressure' to an unsafe level or - **'red-lining the pump!'**

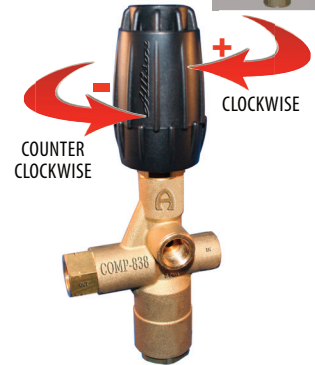
Solution - use this information and buy yourself - not one - but two pressure gauges just in case one is giving you a false reading.

Would you **RED-LINE** your car?
What about the gas engine that powers your pressure washer?
What about your service vehicle?
Your motorcycle?

YOU WOULD BE 'BLOWN AWAY'

IF YOU KNEW HOW CONTRACTORS DO NOT HAVE A PRESSURE GAUGE ON THEIR MACHINE!

This type of unloader sometimes come without the **ADJUSTING KNOB**



NOTE:

K-7 & K-5 & K-9 UNLOADERS

adjust the opposite from most other unloaders.

Operating Pressure
3,000 PSI

MAX SPIKE Pressure
3,500 PSI

If you are in this area with **SPIKE PRESSURE** you have just **'RED-LINED' YOUR PUMP**



Congratulations! Your degree is in the mail!



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200°

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